

LITTLE BLUE BOOK NO. 39
Edited by E. Haldeman-Julius

The Story of Aristotle's Philosophy

Will Durant, Ph.D.



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HALDEMAN-JULIUS PUBLICATIONS
GIRARD, KANSAS

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PRINTED IN THE UNITED STATES OF AMERICA

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A WORD TO THE READER

The student who has come to philosophy under the spur of Plato's eloquence will need some encouragement to face the more practical and prosaic work of Aristotle. If he finds the following essay difficult and unattractive, let him reflect that Aristotle's is almost the most abstract and obscure of all the great philosophies; and that only the exigencies of logical and chronological sequence have led us to study him before mastering simpler systems. Aristotle is hard to grasp because his work is so varied and manifold that no centralizing unity can be found to co-ordinate it for easier comprehension. Nor is there in his work any enthralling drama of passionate reform; he is a man of the world who has become almost reconciled to the eternity of human imperfections. The author has spared neither time nor labor to make out under the mummy-like mass of lecture notes in which Aristotle has come down to us, the features of the living man; but he is very much afraid that he has failed.

W. D.

THE STORY OF ARISTOTLE'S PHILOSOPHY

I. THE HISTORICAL BACKGROUND

Aristotle was born at Stagira, a Macedonian city some two hundred miles to the north of Athens, in the year 384 B. C. His father was friend and physician to Amyntas, King of Macedon and grandfather of Alexander. Aristotle himself seems to have become a member of the great medical fraternity of Asclepiads. He was brought up in the odor of medicine as many later philosophers were brought up in the odor of sanctity; he had every opportunity and encouragement to develop a scientific bent of mind; he was prepared from the beginning to become the founder of science.

We have a choice of stories for his youth. One narrative represents him as squandering his patrimony in riotous living, joining the army to avoid starvation, returning to Stagira to practice medicine, and going to Athens at the age of thirty to study philosophy under Plato. A more dignified story takes him to Athens at the age of eighteen, and puts him at once under the tutelage of the great Master; but even in this likelier account there is sufficient echo of a reckless and irregular youth, living rapidly.¹ The horrified reader may console himself by observing that in either story our philosopher anchors at last in the quiet groves of the Academy.

Under Plato he studied eight—or twenty—

¹Grote, *Aristotle*, London, 1872, p. 4; Zeller, *Aristotle and the Earlier Peripatetics*, London, 1897, vol. i, pp. 6f.

years; and, indeed, the pervasive Platonism of Aristotle's speculations—even of those most anti-Platonic—suggests the longer period. One would like to imagine these as very happy years: a brilliant pupil guided by an incomparable teacher, walking like Greek lovers in the gardens of philosophy. But they were both geniuses; and it is notorious that geniuses accord with one another as harmoniously as dynamite with fire. Almost half a century separated them; it was difficult for understanding to bridge this gap of years and cancel the incompatibility of souls. Plato recognized the greatness of this strange new pupil from the supposedly barbarian north, and spoke of him once as the *Nous* of the Academy,—as if to say, Intelligence personified. Aristotle had spent money lavishly on the collection of books (that is, in those printless days, manuscripts); he was the first, after Euripides, to gather together a library, and the foundation of the principles of library classification was among his many contributions to scholarship. Therefore Plato spoke of Aristotle's home as "the house of the reader," and seems to have meant the sincerest compliment; but some ancient gossip will have it that the Master intended a sly but vigorous dig at a certain book-wormishness in Aristotle. A more authentic quarrel seems to have arisen towards the end of Plato's life. Our ambitious youth apparently developed an "Œdipus complex" against his spiritual father for the favors and affections of philosophy, and began to hint that wisdom would not die with Plato; while the old sage spoke of his pupil as a foal that kicks his mother after draining her dry.² The learned Zeller,³ in

²Benn, *The Greek Philosophers*, London, 1882, vol. i, p. 283.

³Vol. i, p. 11.

whose pages Aristotle almost achieves the Nirvana of respectability, would have us reject these stories; but we may presume that where there is still so much smoke there was once a fire.

The other incidents of this Athenian period are still more problematical. Some biographers tell us that Aristotle founded a school of oratory to rival Isocrates; and that he had among his pupils in this school the wealthy Hermias, who was soon to become autocrat of the city-state of Atarneus. After reaching this elevation Hermias invited Aristotle to his court; and in the year 344 B. C. he rewarded his teacher for past favors by bestowing upon him a sister (or a niece) in marriage. One might suspect this as a Greek gift; but the historians hasten to assure us that Aristotle, despite his genius, lived happily enough with his wife, and spoke of her most affectionately in his will. It was just a year later that Philip, King of Macedon, called Aristotle to the court at Pella to undertake the education of Alexander. It bespeaks the rising repute of our philosopher that the greatest monarch of the time, looking about for the greatest teacher, should single out Aristotle to be the tutor of the future master of the world.

Philip was determined that his son should have every educational advantage, for he had made for him illimitable designs. His conquest of Thrace in 356 B. C. had given him command of gold mines which at once began to yield him precious metal to ten times the amount then coming to Athens from the failing silver of Laurium; his people were vigorous peasants and warriors, as yet unspoiled by city luxury and vice: here was the combination that would make possible the subjugation of a hundred petty city-states and the political unification

of Greece. Philip had no sympathy with the individualism that had fostered the art and intellect of Greece, but had at the same time disintegrated her social order; in all these little capitals he saw not the exhilarating culture and the unsurpassable art, but the commercial corruption and the political chaos; he saw insatiable merchants and bankers absorbing the vital resources of the nation, incompetent politicians and clever orators misleading a busy populace into disastrous plots and wars, factions cleaving classes and classes congealing into castes: this, said Philip, was not a nation but only a welter of individuals,—geniuses and slaves; he would bring the hand of order down upon this turmoil, and make all Greece stand up united and strong as the political center and basis of the world. In his youth in Thebes he had learned the arts of military strategy and civil organization under the noble Epaminondas; and now, with courage as boundless as his ambition, he bettered the instruction. In 338 B. C. he defeated the Athenians at Chaeronea, and saw at last a Greece united, though with chains. And then, as he stood upon this victory, and planned how he and his son should master and unify the world, he fell under an assassin's hand.

Alexander, when Aristotle came, was a wild youth of thirteen: passionate, epileptic, almost alcoholic; it was his pastime to tame horses untamable by men. The efforts of the philosopher to cool the fires of this budding volcano were not of much avail; Alexander had better success with Bucephalus than Aristotle with Alexander. "For a while," says Plutarch, "Alexander loved and cherished Aristotle no less than as if he had been his own father; saying that though he had received life from the one, the other had taught him the art of liv-

ing." ("Life," says a fine Greek adage, "is the gift of Nature; but beautiful living is the gift of wisdom.") "For my part," said Alexander in a letter to Aristotle, "I had rather excel in the knowledge of what is good than in the extent of my power and dominion." But this was probably no more than a royal-youthful compliment; beneath the enthusiastic tyro of philosophy was the fiery son of a barbarian princess and an untamed king; the restraints of reason were too delicate to hold these ancestral passions in leash; and Alexander left philosophy after two years to mount the throne and ride the world. History leaves us free to believe (though we should suspect these pleasant thoughts) that Alexander's unifying passion derived some of its force and grandeur from his teacher, the most synthetic thinker in the history of thought; and that the conquest of order in the political realm by the pupil, and in the philosophic realm by the master, were but diverse sides of one noble and epic project—two magnificent Macedonians unifying two chaotic worlds.

But as usual, impersonal economic factors lay hidden under the surface of personal and dramatic events. The development of commerce had bound the Mediterranean nations, from Persia to Spain, into one great web of trade; and this commercial unity, harassed in a thousand ways by political frontiers, autocratic tolls, and the vicissitudes of unprotected transport, called insistently for unity of political and military administration. Persia controlled the Asiatic land routes of the eastern half of this economic system; Greece (or, since Philip, Macedon) controlled the Mediterranean sea-routes of the western half. It appeared to Alexander that the absorption of one of these political systems by the other was made in-

evitable by the growing pressure of economic circumstance. Hence his reply to the Persian embassy which came to him from Darius, suggesting conciliation and division of rule: "As it would be impossible for order to reign in the world with two suns, so it is impossible for the earth to be at peace with two masters." And so he set out, in the year 334 B. C., to conquer Persia. Three years later the task was accomplished, and the Mediterranean world was one.

He had left behind him, in the cities of Greece, governments favorable to him but populations resolutely hostile. The long tradition of a free and once imperial Athens made subjection—even to a brilliant world-conquering despot—intolerable; and the bitter eloquence of Demosthenes kept the Assembly always on the edge of revolt against the "Macedonian party" that held the reins of city power. Now when Aristotle, after another period of travel, returned to Athens in the year 334 B. C., he very naturally associated with this Macedonian group, and took no pains to conceal his approval of Alexander's unifying rule. As we study the remarkable succession of works, in speculation and research, which Aristotle proceeded to unfold in the last twelve years of his life; and as we watch him in his multifold tasks of organizing his school, and of organizing such a wealth of knowledge as probably never before had passed through the mind of one man; let us occasionally remember that this was no quiet and secure pursuit of truth; that at any minute the political sky might change, and precipitate a storm in this peaceful philosophic life. Only with this situation in mind shall we understand Aristotle's political philosophy, and his tragic end.

II. THE WORK OF ARISTOTLE

It was not hard for the instructor of the king of kings to find pupils even in so hostile a city as Athens. When, in the fifty-third year of his age, Aristotle established his school, the Lyceum, so many students flocked to him that it became necessary to make complicated regulations for the maintenance of order. The students themselves determined the rules, and elected, every ten days, one of their number to supervise the School. But we must not think of it as a place of rigid discipline; rather the picture which comes down to us is of scholars eating their meals in common with the master, and learning from him as he and they strolled up and down the Walk along the athletic field from which the Lyceum took its name.⁴

The new School was no mere replica of that which Plato had left behind him. The Academy was devoted above all to mathematics and to speculative and political philosophy; the Lyceum had rather a tendency to biology and the natural sciences. If we may believe Pliny,⁵ Alexander instructed his hunters, gamekeepers, gardeners and fishermen to furnish Aristotle with all the zoological and botanical material he might desire; other ancient writers tell us that at one time he had at his disposal a thousand men scattered throughout Greece and Asia, collecting for him specimens of the fauna and flora of every land. With this

⁴The Walk was called *Peripatos*; hence the later name, Peripatetic School. The athletic field was part of the grounds of the temple of Apollo Lyceus—the protector of the flock against the wolf (*lycos*).

⁵*Hist. Nat.*, viii, 16; in Lewes, *Aristotle, a Chapter from the History of Science*, London, 1864, p. 15.

wealth of material he was enabled to establish the first great zoological garden that the world had seen. We can hardly exaggerate the influence of this collection upon his science and his philosophy.

Where did Aristotle derive the funds to finance these undertakings? He was himself, by this time, a man of spacious income; and he had married into the fortune of one of the most powerful public men in Greece. Athenaeus (no doubt with some exaggeration) relates that Alexander gave Aristotle, for physical and biological equipment and research, the sum of 800 talents (in modern purchasing power, some \$4,000,000).⁶ It was at Aristotle's suggestion, some think, that Alexander sent a costly expedition to explore the sources of the Nile and discover the causes of its periodical overflow.⁷ Such works as the digest of 158 political constitutions, drawn up for Aristotle, indicate a considerable corps of aides and secretaries. In short we have here the first example in European history of the large-scale financing of science by public wealth. What knowledge would we not win if modern states were to support research on a proportionately lavish scale!

Yet we should do Aristotle injustice if we were to ignore the almost fatal limitations of equipment which accompanied these unprecedented resources and facilities. He was compelled "to fix time without a watch, to compare degrees of heat without a thermometer, to observe the heavens without a telescope, and the weather without a barometer. . . . Of all our mathematical, optical and physical instruments he possessed only the rule and compass,

⁶Grant, *Aristotle*, Edinburgh, 1877, p. 18.

⁷The expedition reported that the inundations were due to the melting of the snow on the mountains of Abyssinia.

together with the most imperfect substitutes for some few others. Chemical analysis, correct measurements of weights, and a thorough application of mathematics to physics, were unknown. The attractive force of matter, the law of gravitation, electrical phenomena, the conditions of chemical combination, pressure of air and its effects, the nature of light, heat, combustion, etc.; in short, all the facts on which the physical theories of modern science are based were wholly, or almost wholly, undiscovered."⁸

See, here, how inventions make history: for lack of a telescope, Aristotle's astronomy is a tissue of childish romance; for lack of a microscope his biology wanders endlessly astray. Indeed, it was in industrial and technical invention that Greece fell furthest below the general standard of its unparalleled achievements. The Greek disdain of manual work kept everybody but the listless slave from direct acquaintance with the processes of production, from that stimulating contact with machinery which reveals defects and prefigures possibilities; technical invention was possible only to those who had no interest in it, and could not derive from it any material reward. Perhaps the very cheapness of the slaves made invention lag; muscle was still less costly than machines. And so, while Greek commerce conquered the Mediterranean Sea, and Greek philosophy conquered the Mediterranean mind, Greek science straggled, and Greek industry remained almost where Ægean industry had been when the invading Greeks had come down upon it, at Cnossos, at Tiryns and Mycene, a thousand years before. No doubt we have here the reason why Aristotle so seldom appeals to

⁸Zeller, i, 264, 443.

experiment; the mechanisms of experiment had not yet been made; and the best he could do was to achieve an almost universal and continuous observation. Nevertheless the vast body of data gathered by him and his assistants became the groundwork of the progress of science, the text-book of knowledge for two thousand years; one of the wonders of the work of man.

Aristotle's writings ran into the hundreds. Some ancient authors credit him with four hundred volumes, others with a thousand. What remains is but a part, and yet it is a library in itself—conceive the scope and grandeur of the whole. There are, first, the *Logical* works: "Categories," "Topics," "Prior" and "Posterior Analytics," "Propositions," and "Sophistical Refutations"; these works were collected and edited by the later Peripatetics under the general title of Aristotle's "Organon,"—that is, the organ or instrument of correct thinking. Secondly, there are the *Scientific* works: "Physics," "On the Heavens," "Growth and Decay," "Meteorology," "Natural History," "On the Soul," "The Parts of Animals," "The Movements of Animals," and "The Generation of Animals." There are, thirdly, the *Esthetic* works: "Rhetoric" and "Poetics." And fourthly come the more strictly *Philosophical* works: "Ethics," "Politics," and "Metaphysics." Here, evidently, is the Encyclopaedia Britannica of Greece: every problem under the sun and about it finds a place; no wonder there are more errors and absurdities here than in any other philosopher who ever wrote. Here

⁹This is the chronological order, so far as known (Zeller, i, 156f). Our discussion will follow this order except in the case of the "Metaphysics."

is such a synthesis of knowledge and theory as no man would ever achieve again till Spencer's day, and even then not half so magnificently; here, better than Alexander's fitful and brutal victory, was a conquest of the world. If philosophy is the quest of unity Aristotle deserves the high name that twenty centuries gave him—*Ille Philosophus: The Philosopher*.

Naturally, in a mind of such scientific turn, poesy was lacking. We must not expect of Aristotle such literary brilliance as floods the pages of the dramatist-philosopher Plato. Instead of giving us great literature, in which philosophy is embodied (and obscured) in myth and imagery, Aristotle gives us science, technical, abstract, concentrated; if we go to him for entertainment we shall sue for the return of our money. Instead of giving terms to literature, as Plato did, he builds the terminology of science and philosophy; we can hardly speak of any science today without employing terms which he invented; they lie like fossils in the strata of our speech: faculty, mean, maxim (meaning, in Aristotle, the major premise of a syllogism), category, energy, actuality, motive, end, principle, form—these indispensable coins of philosophic thought were minted in his mind. And perhaps this passage from delightful dialogue to precise scientific treatise was a necessary step in the development of philosophy; and science, which is the basis and backbone of philosophy, could not grow until it had evolved its own strict methods of procedure and expression. Aristotle, too, wrote literary dialogues, as highly reputed in their day as Plato's, but they are lost, just as the scientific treatises of Plato have perished. Probably time has preserved of each man the better part.

Finally, it is possible that the writings at-

tributed to Aristotle were not his, but were largely the compilations of students and followers who had embalmed the unadorned substance of his lectures in their notes. It does not appear that Aristotle published in his lifetime any writings except those on logic and rhetoric; and the present form of the logical treatises is due to later editing. In the case of the *Metaphysics* and the *Politics* the notes left by Aristotle seem to have been put together by his executors without revision or alteration. Even the unity of style which marks Aristotle's writings, and offers an argument to those who defend his direct authorship, may be, after all, merely a unity given them through common editing by the Peripatetic School. About this matter there rages a sort of Homeric question, of almost epic scope, into which the busy reader will not care to go, and on which a modest student will not undertake to judge.¹⁰ We may at all events be sure that Aristotle is the spiritual author of all these books that bear his name: that the hand may be in some cases another's hand, but that the head and the heart are his.¹¹

¹⁰Cf. Zeller, ii, 204, note; Encyc. Brit., ii, 509; and Shule: *History of the Aristotelian Writings*.

¹¹The reader who wishes to go to the philosopher himself will find the *Meteorology* an interesting example of Aristotle's scientific work; he will derive much practical instruction from the *Rhetoric*; and he will find Aristotle at his best in books i-ii of the *Ethics*, and books i-iv of the *Politics*. The best translation of the *Ethics* is Welldon's; of the *Politics*, Jowett's. Sir Alexander Grant's *Aristotle* is a simple book; Zeller's *Aristotle* (vols. iii-iv in his *Greek Philosophy*) is scholarly but dry; Gomperz's *Greek Thinkers* (vol. iv) is masterly but difficult.

III. THE FOUNDATION OF LOGIC

The first great distinction of Aristotle is that almost without predecessors, almost entirely by his own hard thinking, he created a new science—Logic. Renan¹² speaks of “the ill training of every mind that has not, directly or indirectly, come under Greek discipline”; but in truth the Greek intellect itself was undisciplined and chaotic till the ruthless formulae of Aristotle provided a ready method for the test and correction of thought. Even Plato (if a lover may so far presume) was an unruly and irregular soul, caught up too frequently in a cloud of myth, and letting beauty too richly veil the face of truth. Aristotle himself, as we shall see, violated his own canons plentifully; but then he was the product of his past, and not of that future which his thought would build. The political and economic decay of Greece brought a weakening of the Hellenic mind and character after Aristotle; but when a new race, after a millennium of barbaric darkness, found again the leisure and ability for speculation, it was Aristotle’s “Organon” of logic, translated by Boethius (470-525 A. D.), that became the very mould of medieval thought, the strict mother of that scholastic philosophy which, though rendered sterile by encircling dogmas, nevertheless trained the intellect of adolescent Europe to reasoning and subtlety, constructed the terminology of modern science, and laid the bases of that same maturity of mind which was to outgrow and overthrow the very system and methods which had given it birth and sustenance.

¹²*History of the People of Israel*, vol. v, p. 338.

Logic means, simply, the art and method of correct thinking. It is the *logy* or method of every science, of every discipline and every art; and even music harbors it. It is a science because to a considerable extent the processes of right thinking (and we use "right" not in a moral but in a mathematical sense) can be reduced to rules like physics and geometry, and taught to any normal mind; it is an art because by practice it gives to thought, at last, that unconscious and immediate accuracy which guides the fingers of the pianist over his instrument to effortless harmonies. Nothing is so dull as logic, and nothing is so important.

There was a hint of this new science in Socrates' maddening insistence on definitions, and in Plato's constant refining of every concept. Aristotle's little treatise on *Definitions* shows how his logic found nourishment at this source. "If you wish to converse with me," said Voltaire, "define your terms." How many a debate would have been deflated into a paragraph if the disputants had dared to define their terms! This is the alpha and omega of logic, the heart and soul of it, that every important term in serious discourse shall be subjected to strictest scrutiny and definition. It is difficult, and ruthlessly tests the mind; but once done it is half of any task.

Yet how shall we proceed to define an object or a term? Aristotle answers that every good definition has two parts, stands on two solid feet: first, it assigns the object in question to a class or group of objects whose general characteristics are also its own—so man is, first of all, an animal; and secondly, it indicates wherein the object differs from all the other members of its class—so man, in the Aristotelian system, is a *rational* animal, his "specific

difference" is that unlike all other animals he is rational (here, you see, is the origin of a pretty legend). Aristotle drops an object into the ocean of its class, then takes it out all dripping with generic meaning, with the marks of its kind and group; while its individuality and difference shine out all the more clearly for this juxtaposition with other objects which resemble it so much and are so different.

Passing out from this rear line of logic we come into the great battlefield on which Aristotle fought out with Plato the dread question of "universals"; it was the first conflict in a war which was to last till our own day, and make all medieval Europe ring with the clash of "realists" and "nominalists."¹³ A universal, to Aristotle, is any common noun, any name capable of universal application to the members of a class: so *animal*, *man*, *book*, *tree*, are universals. But these universals are subjective notions, not tangibly objective realities; they are *nomina* (names), not *res* (things); all that exists outside us is a world of individual and specific objects, not of generic and universal things; men exist, and trees, and animals; but man-in-general, or the universal man, does not exist, except in thought; he is a handy mental abstraction, not an external presence or reality. Now Aristotle understands Plato to have held that great universals have objective existence; and indeed Plato had said that the universal is incomparably more lasting and important and substantial than the individual—the latter being but a little wavelet in a ceaseless surf; *men* come and go, but *man* goes on forever. Aristotle's is a matter-of-fact mind;

¹³It was in reference to this debate that Friedrich Schlegel said, "Every man is born either a Platonist or an Aristotelian" (in Benn, i, 291).

as William James would say, a tough, not a tender, mind; he sees the root of endless mysticism and scholarly nonsense in this Platonic "realism"; and he attacks it with all the vigor of a first polemic. As Brutus loved not Caesar less but Rome more, so Aristotle says, *Amicus Plato, sed magis amica veritas*—"Dear is Plato, but dearer still is truth." A hostile commentator might remark that Aristotle (like Nietzsche) criticizes Plato so keenly because he is conscious of having borrowed from him generously; no man is a hero to his debtors. But Aristotle has a healthy attitude, nevertheless; he is a realist almost in the modern sense; he is resolved to concern himself with the objective presence, while Plato is absorbed in a subjective future; or, to juggle with the words, Aristotle has a present objective, and Plato's subject is the future. There was, in the Socratic-Platonic demand for definitions, a tendency away from things and facts to theories and ideas, from particulars to generalities, from science to scholasticism; at last Plato became so devoted to generalities that they began to determine his particulars, so devoted to ideas that they began to define or select his facts. Aristotle preaches a return to things, to the "unwithered face of nature" and reality; he had a lusty preference for the concrete particular, for the flesh and blood individual. But Plato so loved the general and universal that in the *Republic* he destroyed the individual to make a perfect state.

Yet, as is the usual humor of history, the young warrior takes over many of the qualities of the old master whom he assails. We have always goodly stock in us of that which we condemn: as only similars can be profitably contrasted, so only similar people quarrel, and

the bitterest wars are over the slightest variations of purpose or belief. The knightly Crusaders found in Saladin a gentleman with whom they could quarrel amicably; but when the Christians of Europe broke into hostile camps there was no quarter for even the courtliest foe. Aristotle is so ruthless with Plato because there is so much of Plato in him; he too remains a lover of abstractions and generalities, repeatedly betraying the simple fact for some speciously bedizened theory, and compelled to a continuous struggle to conquer the philosophic passion for exploring the empyrean.

There is a heavy trace of this in the most characteristic and original of Aristotle's contributions to philosophy—the doctrine of the syllogism. A syllogism is a trio of propositions of which the third (the conclusion) follows from the conceded truth of the other two (the "major" and "minor" premises). E. g., man is a rational animal; but Socrates is a man; therefore Socrates is a rational animal. The mathematical reader will see at once that the structure of the syllogism resembles the proposition that two things equal to the same thing are equal to each other; if A is B, and C is A, then C is B. As in the mathematical case the conclusion is reached by canceling from both premises their common term, A; so in our syllogism the conclusion is reached by canceling from both premises their common term "man," and combining what remains. The difficulty, as logicians have pointed out from the days of Pyrrho to those of Stuart Mill, lies in this, that the major premise of the syllogism takes for granted precisely the point to be proved; for if Socrates is not rational (and since no one questions that he is a man) it is not universally true that man is a rational animal. Aristotle would reply, no doubt, that

where an individual is found to have a large number of qualities characteristic of a class ("Socrates is a man"), a strong presumption is established that the individual has the other qualities characteristic of the class ("rationality"). But apparently the syllogism is not a mechanism for the discovery of truth so much as for the clarification of exposition and thought.

All this, then, like the many other items of the *Organon*, has its value: "Aristotle has discovered and formulated every canon of theoretical consistency, and every artifice of dialectical debate, with an industry and acuteness which cannot be too highly extolled; and his labors in this direction have perhaps contributed more than any other single writer to the intellectual stimulation of after ages."¹⁴ But no man ever lived who could lift logic to a lofty strain: a guide to correct reasoning is as elevating as a manual of etiquette; we may use it, but it hardly spurs us to nobility. Not even the bravest philosopher would sing to a book of logic underneath the bough. One always feels towards logic as Virgil bade Dante feel towards those who had been damned because of their colorless neutrality: *Non ragionam di lor, ma guarda e passa*—"Let us think no more about them, but look once and pass on."¹⁵

IV. THE ORGANIZATION OF SCIENCE

1. GREEK SCIENCE BEFORE ARISTOTLE

"Socrates," says Renan,¹⁶ "gave philosophy to mankind, and Aristotle gave it science. There was philosophy before Socrates, and science before Aristotle; and since Socrates and since

¹⁴Benn, i, 307.

¹⁵*Inferno*, iii, 60.

¹⁶*Life of Jesus*, ch. 28

Aristotle, philosophy and science have made immense advances. But all has been built upon the foundation which they laid." Before Aristotle, science was in embryo; with him it was born.

Earlier civilizations than the Greek had made attempts at science; but so far as we can catch their thought through their still obscure cuneiform and hieroglyphic script, their science was indistinguishable from theology. That is to say, these pre-Hellenic peoples explained every obscure operation in Nature by some supernatural agency; everywhere there were gods. Apparently it was the Ionian Greeks who first dared to give natural explanations of cosmic complexities and mysterious events: they sought in physics the natural causes of particular incidents, and in philosophy a natural theory of the whole. Thales (640-550 B. C.), the "Father of Philosophy," was primarily an astronomer, who astonished the natives of Miletus by informing them that the sun and stars (which they were wont to worship as gods) were merely balls of fire. His pupil Anaximander (610-540 B. C.), the first Greek to make astronomic and geographical charts, believed that the universe had begun as an undifferentiated mass, from which all things had arisen by the separation of opposites; that astronomic history periodically repeated itself in the evolution and dissolution of an infinite number of worlds; that the earth was at rest in space by a balance of internal impulsions (like Buridan's ass); that all our planets had once been fluid, but had been evaporated by the sun; that life had first been formed in the sea, but had been driven upon the land by the subsidence of the water; that of these stranded animals some had developed the capacity to breathe air, and had so become the progenitors

of all later land life; that man could not from the beginning have been what he now was, for if man, on his first appearance, had been so helpless at birth, and had required so long an adolescence, as in these later days, he could not possibly have survived. Anaximenes, another Milesian (fl. 450 B. C.), described the primeval condition of things as a very rarefied mass, gradually condensing into wind, cloud, water, earth, and stone; the three forms of matter—gas, liquid and solid—were progressive stages of condensation; heat and cold were merely rarefaction and condensation; earthquakes were due to the solidification of an originally fluid earth; life and soul were one, an animating and expansive force present in everything everywhere. Anaxagoras (500-428 B. C.), teacher of Pericles, seems to have given a correct explanation of solar and lunar eclipses; he discovered the processes of respiration in plants and fishes; and he explained man's intelligence by the power of manipulation that came when the fore-limbs were freed from the tasks of locomotion.

Heraclitus (530-470 B. C.), who left wealth and its cares to live a life of poverty and study in the shade of the temple porticoes at Ephesus, turned science from astronomy to earthlier concerns. All things forever flow and change, he said; even in the stillest matter there is unseen flux and movement. Cosmic history runs in repetitious cycles, each beginning and ending in fire (here is one source of the Stoic and Christian doctrine of last judgment and hell). "Through strife," says Heraclitus, "all things arise and pass away. . . War is the father and king of all: some he has made gods and some men; some slaves, and some free." Where there is no strife there is decay: "the mixture which is not shaken decomposes." In this flux of change and struggle and selection, only one

thing is constant, and that is law. "This order, the same for all things, no one of gods or men has made; but it always was, and is, and shall be."—Empedocles (fl. 445 B. C., in Sicily) developed to a further stage the idea of evolution.¹⁷ Organs arise not by design but by selection. Nature makes many trials and experiments with organisms, combining organs variously; where the combination fails, the organism is weeded out; as time goes on, organisms are more and more intricately and successfully adapted to their surroundings.—Finally, in Leucippus (fl. 445 B. C.) and Democritus (460-360), master and pupil in Thracian Abdera, we get the last stage of pre-Aristotelian science—materialistic, deterministic atomism. "Everything," said Leucippus, "is driven by necessity." "In reality," says Democritus,¹⁸ "there are only atoms and the void." Perception is due to the expulsion of atoms from the object upon the sense organ.¹⁹ There are or have been or will be an infinite number of worlds; at every moment planets are colliding and dying, and new worlds are rising out of chaos by the selective aggregation of atoms of similar size and shape. There is no design; the universe is a machine.

This, in dizzy and superficial summary, is the story of Greek science before Aristotle. Its cruder items can be well forgiven when we consider the narrow circle of experimental and observational equipment within which these pioneers were compelled to work. The stagnation of Greek industry under the incubus of slavery prevented the full development of these magnificent be-

¹⁷Cf. Osborn, *From the Greeks to Darwin*; and M. Arnold, *Empedocles on Etna*.

¹⁸Democritus is ranked above Plato and Aristotle in Francis Bacon's *De Principiis* (*Philosophical Works*, ed. Robertson, London, 1905, p. 650).

¹⁹Cf. Newton's theory of light, now (through Einstein) returning into favor.

ginnings; and the rapid complication of political life in Athens turned the Sophists and Socrates and Plato away from these physical and biological researches into the vaguer paths of ethical and political theory. It is one of the many glories of Aristotle that he was broad and brave enough to compass and combine these two lines of Greek thought, the physical and the moral; that going back beyond his teacher, he caught again the thread of scientific development in the pre-Socratic Greeks, carried on their work with more resolute detail and more varied observation, and brought together all the accumulated results in a magnificent body of organized science.

2. ARISTOTLE AS A NATURALIST

If we begin here chronologically, with his *Physics*, we shall be disappointed; for we find that this treatise is really a *metaphysics*, an abstruse analysis of matter, motion, space, time, infinity, cause, and other such "ultimate concepts." One of the more lively passages is an attack on Democritus' "void": there can be no void or vacuum in nature, says Aristotle, for in a vacuum all bodies would fall with equal velocity; this being impossible, "the supposed void turns out to have nothing in it"—an instance at once of Aristotle's very occasional humor, his addiction to unproved assumptions, and his tendency to disparage his predecessors in philosophy. It was the habit of our philosopher to preface his works with historical sketches of previous contributions to the subject in hand, and to add to every contribution an annihilating refutation. "Aristotle, after the Ottoman manner," says Bacon, "thought he could not reign secure without putting all his brethren to death."²⁰ But to this fratricidal mania we owe much of our knowledge of pre-Socratic thought.

²⁰*Advancement of Learning*, bk. iii. ch. 4.

For reasons already given, Aristotle's astronomy represents very little advance upon his predecessors. He rejects the view of Pythagoras (six century B. C.) that the sun is the center of our system; he prefers to give that honor to the earth. But the little treatise on meteorology is full of brilliant observations, and even its speculations strike illuminating fire. This is a cyclic world, says our philosopher: the sun forever evaporates the sea, dries up rivers and springs, and transforms at last the boundless ocean into the barest rock; while conversely the uplifted moisture, gathered into clouds, falls and renews the rivers and the seas. Everywhere change goes on, imperceptibly but effectively. Egypt is "the work of the Nile," the product of its deposits through a thousand centuries. Here the sea encroaches upon the land, there the land reaches out timidly into the sea; new continents and new oceans rise, old oceans and old continents disappear, and all the face of the world is changed and rechanged in a great systole and diastole of growth and dissolution. Sometimes these vast effects occur suddenly, and destroy the geological and material bases of civilization and even of life; great catastrophes have periodically denuded the earth and reduced man again to his first beginnings; like Sisyphus, civilization has repeatedly neared its zenith only to fall back into barbarism and begin *da capo* its upward travail. Hence the almost "eternal recurrence," in civilization after civilization, of the same inventions and discoveries, the same "dark ages" of slow economic and cultural accumulation, the same rebirths of learning and science and art. No doubt some popular myths are vague traditions surviving from earlier cultures. So the story of man runs in a dreary circle, because he is not yet master of the earth that holds him.

3. THE FOUNDATION OF BIOLOGY

It is not so with life.

As Aristotle walked wondering through his great zoological garden, he became convinced that the infinite variety of life could be arranged in a continuous series in which each link would be almost indistinguishable from the next. In all respects, whether in structure, or mode of life, or reproduction and rearing, or sensation and feeling, there are minute gradations and progressions from the lowest organisms to the highest.²¹ At the bottom of the scale we can scarcely divide the living from the "dead": "nature makes so gradual a transition from the inanimate to the animate kingdom that the boundary lines which separate them are indistinct and doubtful"; and perhaps a degree of life exists even in the inorganic. Again, many species cannot with certainty be called plants or animals. And as in these lower organisms it is almost impossible at times to assign them to their proper genus and species, so similar are they; so in every order of life the continuity of gradations and differences is as remarkable as the diversity of functions and forms. But in the midst of this bewildering richness of structures certain things stand out convincingly: that life has grown steadily in complexity and in power;²² that intelligence has progressed in correlation with complexity of structure and mobility of form;²³ that there has been an increasing specialization of function, and a continuous centralization of physiological control.²⁴ Slowly life created for

²¹*Hist. Animalium*, viii.

²²*De Anima*, ii, 2.

²³*De Partibus Animalium*, i, 7; ii, 10.

itself a nervous system and a brain; and mind moved resolutely on towards the mastery of its environment.

The remarkable fact here is that with all these gradations and similarities leaping to Aristotle's eyes, he does not come to the theory of evolution. He rejects Empedocles' doctrine that all organs and organisms are a survival of the fittest,²⁵ and Anaxagoras' idea that man became intelligent by using his hands for manipulation rather than for movement; Aristotle thinks, on the contrary, that man so used his hands because he had become intelligent.²⁶ Indeed, Aristotle makes as many mistakes as possible for a man who is founding the science of biology. He thinks, for example, that the male element in reproduction merely stimulates and quickens; it does not occur to him (what we now know from experiments in parthenogenesis) that the essential function of the sperm is not so much to fertilize the ovum as to provide the embryo with the heritable qualities of the male parent, and so permit the offspring to be a vigorous variant, a new admixture of two ancestral lines. As human dissection was not practiced in his time, he is particularly fertile in physiological errors: he knows nothing of muscles, not even of their existence; he does not distinguish arteries from veins; he thinks the brain is an organ for cooling the blood; he believes, forgivably, that man has more sutures in the skull than woman; he believes, less forgivably, that man has only eight ribs on each side; he believes, incredibly and unforgivably, that woman has

²⁴*De Partibus Animalium*, iv, 5-6.

²⁵*De Anima*, ii, 4.

²⁶*De Part. An.*, iv. 10.

fewer teeth than man.²⁷ Apparently Aristotle's relations with women were of the most amicable kind.

Yet he makes a greater total advance in biology than any Greek before or after him. He perceives that birds and reptiles are near allied in structure; that the monkey is in form intermediate between quadrupeds and man; and once he boldly declares that man belongs in one group of animals with the viviparous quadrupeds (our "mammals").²⁸ He remarks that the soul in infancy is scarcely distinguishable from the soul of animals.²⁹ He makes the illuminating observation that diet often determines the mode of life; "for of beasts some are gregarious, and others solitary—they live in the way which is best adapted to . . . obtain the food of their choice."³⁰ He anticipates Von Baer's famous law that characters common to the genus (like eyes and ears) appear in the developing organism before characters peculiar to its species (like the "formula" of the teeth), or to its individual self (like the final color of the eyes);³¹ and he reaches out across two thousand years to anticipate Spencer's generalization that individuation varies inversely as genesis—that is, that the more highly developed and specialized a species or an individual happens to be, the smaller will be the number of its offspring.³² He notices and explains reversion to type—the tendency of a prominent variation (like genius) to be diluted in mating and lost

²⁷Gomperz, iv. 57; Zeller, i, 262, note; Lewes, 158, 165, etc.

²⁸*Hist. An.* i, 6; ii, 3.

²⁹*Ibid.*, viii, 1.

³⁰*Politics*, i, 8.

³¹*Hist. An.* i, 6; ii, 8.

³²*De Generatione Animalium*, ii, 12.

in successive generations. He makes many zoological observations which, temporarily rejected by later biologists, have been confirmed by modern research—of fishes that make nests, for example, and a species of shark that boasts of a placenta.

And finally he establishes the science of embryology. "He who sees things grow from their beginning," he writes, "will have the finest view of them." Hippocrates (b. 460 B. C.), greatest of Greek physicians, had given a fine example of the experimental method, by breaking a hen's eggs at various stages of incubation; and had applied the results of these studies in his treatise "On the Origin of the Child." Aristotle followed this lead and performed experiments which enabled him to give a description of the development of the chick which even today arouses the admiration of embryologists.³³ He must have performed some novel experiments in genetics, for he disproves the theory that the sex of the child depends on what testis supplies the reproductive fluid, by quoting a case where the right testis of the father had been tied and yet the children had been of different sexes.³⁴ He raises some very modern problems of heredity. A woman of Elis had married a negro; her children were all whites, but in the next generation negroes reappeared; where, asks Aristotle, was the blackness hidden in the middle generation?³⁵ There was but a step from such a vital and intelligent query to the epochal experiments of Gregor Mendel (1822-1882). *Prudens quaestio dimidium scientiae*—

³³*De Part. An.*, iii, 4.

⁴³Lewes, 112.

³⁵Gomperz, iv, 169.

to know what to ask is already to know half. Surely, despite the errors that mar these biological works, they form the greatest monument ever raised to the science by any one man. When we consider that before Aristotle there had been, so far as we know, no biology beyond scattered observations, we perceive that this achievement alone might have sufficed for one life-time, and would have given immortality. But Aristotle had only begun.

V. METAPHYSICS AND THE NATURE OF GOD

His metaphysics grew out of his biology. Everything in the world is moved by an inner urge to become something greater than it is. Everything is both the *form* or reality which has grown out of something which was its *matter* or raw material; and it may in its turn be the matter out of which still higher forms will grow. So the man is the form of which the child was the matter; the child is the form and its embryo the matter; the embryo the form, the ovum the matter; and so back till we reach in a vague way the conception of matter without form at all. But such a formless matter would be no-thing, for every thing was a form. Matter, in its widest sense, is the possibility of form; and form is the actuality, the finished reality, of matter. Matter obstructs, form constructs. Form is not merely the shape but the shaping force, an inner necessity and impulse which moulds mere material to a specific figure and purpose; it is the realization of a potential capacity of matter; it is the sum of the powers residing in anything to do, to be, or to become. Nature is the conquest of matter

by form, the constant progression and victory of life.³⁶

Everything in the world moves naturally to a specific fulfilment. Of the varied causes which determine an event, the final cause, which determines the purpose, is the most decisive and important. The mistakes and futilities of nature are due to the inertia of matter resisting the forming force of purpose—hence the abortions and the monsters that mar the panorama of life. Development is not haphazard or accidental (else how could we explain the almost universal appearance and transmission of useful organs?); everything is guided in a certain direction from within, by its nature and structure and entelechy;³⁷ the egg of the hen is internally designed or destined to become not a duck but a chick; the acorn becomes not a willow but an oak. This does not mean for Aristotle that there is an external providence designing earthly structures and events; rather the design is internal, and arises from the type and function of the thing. "Divine Providence

³⁶Half of our readers will be pleased, and the other half amused, to learn that among Aristotle's favorite examples of manner and form are woman and man; the male is the active, formative principle; the female is passive clay, waiting to be formed. Female offspring are the result of the failure of form to dominate matter (*De Gen. An.*, i, 2).

³⁷*Entelecheia*—having (*echo*, its purpose (*telos*) within (*entos*); one of those magnificent Aristotelian terms which gather up into themselves a whole philosophy. The informed reader need not be reminded that the "ortho-genic" school of evolutionists finds its first formulation in these passages of Aristotle.

coincides completely for Aristotle with the operation of natural causes."³⁸

Yet there is a God, though not perhaps the simple and human god conceived by the forgivable anthropomorphism of the adolescent mind. Aristotle approaches the problem from the old puzzle about motion—how, he asks, does motion begin? He will not accept the possibility that motion is as beginningless as he conceives matter to be: matter may be eternal, because it is merely the everlasting possibility of future forms; but when and how did that vast process of motion and formation begin which at last filled the wide universe with an infinity of shapes? Surely motion has a source, says Aristotle; and if we are not to plunge drearily into an infinite regress, putting back our problem step by step, endlessly, we must posit a prime mover unmoved (*primum mobile immotum*), a being incorporeal, indivisible, spaceless, sexless, passionless, changeless, perfect and eternal. God does not create, but he moves, the world; and he moves it not as a mechanical force but as the total motive of all operations in the world; "God moves the world as the beloved object moves the lover."³⁹ He is the final cause of nature, the drive and purpose of things, the form of the world; the principle of its life, the sum of its vital processes and powers, the inherent goal of its growth, the energizing entelechy of the whole. He is pure energy;⁴⁰ the Scholastic *Actus Purus*—activity *per se*; perhaps the mystic "Force" of modern physics and philosophy. He is not so much a person as a magnetic power.⁴¹

³⁸*Ethics*, i, 10; Zeller, ii, 329.

³⁹*Metaphysics*, ix, 7.

⁴⁰*Ibid*, xii, 8.

⁴¹Grant, 173.

Yet, with his usual inconsistency, Aristotle represents God as self-conscious spirit. A rather mysterious spirit; for Aristotle's God never does anything; he has no desires, no will, no purpose; he is activity so pure that he never acts. He is absolutely perfect; therefore he cannot desire anything; therefore he does nothing. His only occupation is to contemplate the essence of things; and since he himself is the essence of all things, the form of all forms, his sole employment is the contemplation of himself.⁴² Poor Aristotelian God!—he is a *roi-fainéant*, a do-nothing king; “the king reigns, but he does not rule.” No wonder the British like Aristotle; his God is obviously copied from their king.

Or from Aristotle himself. Our philosopher so loved contemplation that he sacrificed to it his conception of divinity. His God is of the quiet Aristotelian type, nothing romantic, withdrawn to his ivory tower from the strife and stain of things; all the world away from the philosopher-kings of Plato, or from the stern flesh-and-blood reality of Yahveh, or the gentle and solicitous fatherhood of the Christian God.

VI. PSYCHOLOGY AND THE NATURE OF ART

Aristotle's psychology is marred with similar obscurity and vacillation. There are many interesting passages: the power of habit is emphasized, and is for the first time called “second nature”; and the laws of association, though not developed, find here a definite formulation. But both the crucial problems of philosophical psychology—the freedom of the will and the immortality of the soul—are left

⁴²*Meta.* xii, 8; *Ethics*, x, 8.

in haze and doubt. Aristotle talks at times like a determinist—"We cannot directly will to be different from what we are"; but he goes on to argue, against determinism, that we can choose what we shall be, by choosing now the environment that shall mould us; so we are free in the sense that we mould our own characters by our choice of friends, books, occupations, and amusements.⁴³ He does not anticipate the determinist's ready reply that these formative choices are themselves determined by our antecedent character, and this at last by unchosen heredity and early environment. He presses the point that our persistent use of praise and blame presupposes moral responsibility and free will; it does not occur to him that the determinist might reach from the same premises a precisely opposite conclusion—that praise and blame are given that they may be part of the factors determining subsequent action.

Aristotle's theory of the soul begins with an interesting definition. The soul is the entire vital principle of any organism, the sum of its powers and processes. In plants the soul is merely a nutritive and reproductive power; in animals it is also a sensitive and locomotor power; in man it is as well the power of reason and thought.⁴⁴ The soul, as the sum of the powers of the body, cannot exist without it; the two are as form and wax, separable only in thought, but in reality one organic whole; the soul is not put into the body like the quicksilver inserted by Daedalus into the images of Venus to make "stand-ups" of them. A personal and particular soul can exist only in its own

⁴³*Ethics*, iii, 7.

⁴⁴*De Anima* ii.

body. Nevertheless the soul is not material, as Democritus would have it; nor does it all die. Part of the rational power of the human soul is passive: it is bound up with memory, and dies with the body that bore the memory; but the "active reason," the pure power of thought, is independent of memory and is untouched with decay. The active reason is the universal as distinguished from the individual element in man; what survives is not the personality, with its transitory affections and desires, but mind in its most abstract and impersonal form.⁴⁵ In short, Aristotle destroys the soul in order to give it immortality; the immortal soul is "pure thought," undefiled with reality, just as Aristotle's God is pure activity, undefiled with action. Let him who can, be comforted with this theology. One wonders sometimes whether this metaphysical eating of one's cake and keeping it is not Aristotle's subtle way of saving himself from anti-Macedonian hemlock?

In a safer field of psychology he writes more originally and to the point, and almost creates the study of esthetics, the theory of beauty and art. Artistic creation, says Aristotle, springs from the formative impulse and the craving for emotional expression. Essentially the form of art is an imitation of reality; it holds the mirror up to nature.⁴⁶ There is in man a pleasure in imitation, apparently missing in lower animals. Yet the aim of art is to represent not the outward appearance of things, but their inward significance; for this, and not the external mannerism and detail, is their reality. There may be more human verity in the sternly

⁴⁵*De Anima*, ii, 4; i, 4; iii, 5.

⁴⁶*Poetics*, i, 1447.

classic moderation of the *Œdipus Rex* than in all the realistic tears of the *Trojan Women*.

The noblest art appeals to the intellect as well as to the feelings (as a symphony appeals to us not only by its harmonies and sequences but by its structure and development); and this intellectual pleasure is the highest form of joy to which any man can rise. Hence a work of art should aim at form, and above all at unity, which is the backbone of structure and the focus of form. A drama, e.g., should have unity of action: there should be no confusing sub-plots, nor any digressive episodes.⁴⁷ But above all, the function of art is catharsis, purification: emotions accumulated in us under the pressure of social restraints, and liable to sudden issue in unsocial and destructive action, are touched off and sluiced away in the harmless form of theatrical excitement; so tragedy "through pity and fear, effects the proper purgation of these emotions."⁴⁸ Aristotle misses certain features of tragedy (e. g., the conflict of principles and personalities); but in this theory of catharsis he has made a suggestion endlessly fertile in the understanding of the almost mystic power of art. It is an illuminating instance of his ability to enter every field of speculation, and to adorn whatever he touches.

VII. ETHICS AND THE NATURE OF HAPPINESS

And yet, as Aristotle developed, and young men crowded about him to be taught and

⁴⁷Aristotle gives only one sentence to unity of time; and does not mention unity of place; so that the "three unities" commonly foisted upon him are later inventions (Norwood, *Greek Tragedy*, p. 42, note).

⁴⁸*Poetics*, vi, 1449.

formed, more and more his mind turned from the details of science to the larger and vaguer problems of conduct and character. It came to him more clearly that above all questions of the physical world there loomed the question of questions—what is the best life?—what is life's supreme good?—what is virtue?—how shall we find happiness and fulfilment?

He is realistically simple in his ethics. His scientific training keeps him from the preaching of superhuman ideals and empty counsels of perfection. "In Aristotle," says Santayana, "the conception of human nature is perfectly sound; every ideal has a natural basis, and everything natural has an ideal development." Aristotle begins by frankly recognizing that the aim of life is not goodness for its own sake, but happiness. "For we choose happiness for itself, and never with a view to anything further; whereas we choose honor, pleasure, intellect . . . because we believe that through them we shall be made happy."⁴⁹ But he realizes that to call happiness the supreme good is a mere truism; what is wanted is some clearer account of the nature of happiness, and the way to it. He hopes to find this way by asking wherein man differs from other beings; and by presuming that man's happiness will lie in the full functioning of this specifically human quality. Now the peculiar excellence of man is his power of thought; it is by this that he surpasses and rules all other forms of life; and as the growth of this faculty has given him his supremacy, so, we may presume, its development will give him fulfilment and happiness.

The chief condition of happiness, then, barring certain physical pre-requisites, is the life of reason—the specific glory and power of

⁴⁹*Ethics*, i, 7.

man. Virtue, or rather excellence,⁵⁰ will depend on clear judgment, self-control, symmetry of desire, artistry of means; it is not the possession of the simple man, nor the gift of innocent intent, but the achievement of experience in the fully developed man. Yet there is a road to it, a guide to excellence, which may save many detours and delays: it is the middle way, the golden mean. The qualities of character can be arranged in triads, in each of which the first and last qualities will be extremes and vices, and the middle quality a virtue or an excellence. So between cowardice and rashness is courage; between stinginess and extravagance is liberality; between sloth and greed is ambition; between humility and pride is modesty; between secrecy and loquacity, honesty; between moroseness and buffoonery, good humor; between quarrelsomeness and flattery, friendship; between Hamlet's indecisiveness and Quixote's impulsiveness is self-control.⁵¹ "Right," then, in ethics or conduct, is not different from "right" in mathematics or engineering; it means correct, fit, what works best to the best result. The golden mean, however, is not like the mathematical mean, an exact average of two precisely calculable extremes; it fluctuates with the collateral circumstances of each situation, and discovers itself only to ma-

⁵⁰The word *excellence* is probably the fittest translation of the Greek *arete*, usually mistranslated *virtue*. The reader will avoid misunderstanding Plato and Aristotle if, where translators write *virtue*, he will substitute *excellence*, *ability*, or *capacity*. The Greek *arete* is the Roman *virtus*; both imply a masculine sort of excellence (*Ares*, god of war; *vir*, a male). Classical antiquity conceived virtue in terms of man, just as medieval Christianity conceived it in terms of woman.

⁵¹*Ethics*, i, 7.

ture and flexible reason. Excellence is an art won by training and habituation: we do not act rightly because we have virtue or excellence, but we rather have these because we have acted rightly; "these virtues are formed in man by his doing the actions";⁵² we are what we repeatedly do. Excellence, then, is not an act but a habit: "the good of man is a working of the soul in the way of excellence in a complete life: . . . for as it is not one swallow or one fine day that makes a spring, so it is not one day or a short time that makes a man blessed and happy."⁵³

Youth is the age of extremes: "if the young commit a fault it is always on the side of excess and exaggeration." The great difficulty of youth (and of many of youth's elders) is to get out of one extreme without falling into its opposite. For one extreme easily passes into the other, whether through "over-correction" or otherwise: insincerity doth protest too much, and humility hovers on the precipice of conceit.⁵⁴ Those who are consciously at one extreme will give the name of virtue not to the mean but to the opposite extreme. Sometimes this is well; for if we are conscious of erring in one extreme "we should aim at the other, and so we may reach the middle position, . . . as men do in straightening bent timber."⁵⁵ But unconscious extremists look upon the golden mean as the greatest vice; they "expel towards each other the man in the middle position; the brave man is called rash by the coward, and cowardly by the rash man, and in other cases

⁵²*Ethics*, ii, 4.

⁵³*Ibid*, i, 7.

⁵⁴"The vanity of Antisthenes" (the Cynic), said Plato, "peeps out through the holes in his cloak."

⁵⁵*Ethics*, ii, 9.

accordingly";⁵⁶ so in modern politics the "liberal" is called "conservative" and "radical" by the radical and the conservative.

It is obvious that this doctrine of the mean is the formulation of a characteristic attitude which appears in almost every system of Greek philosophy. Plato had had it in mind when he called virtue harmonious action; Socrates when he identified virtue with knowledge. The Seven Wise Men had established the tradition by engraving, on the temple of Apollo at Delphi, the motto *meden agan*,—nothing in excess. Perhaps, as Nietzsche claims,⁵⁷ all these were attempts of the Greeks to check their own violence and impulsiveness of character; more truly, they reflected the Greek feeling that passions are not of themselves vices, but the raw material of both vice and virtue, according as they function in excess and disproportion, or in measure and harmony.⁵⁸

But the golden mean, says our matter-of-fact philosopher, is not all of the secret of happiness. We must have, too, a fair degree of worldly goods: poverty makes one stingy and grasping; while possessions give one that freedom from care and greed which is the source of aristocratic ease and charm. The noblest of these external aids to happiness is friendship. Indeed, friendship is more necessary to the happy than to the unhappy; for happiness is

⁵⁶*Ethics*, ii, 8.

⁵⁷*The Birth of Tragedy*.

⁵⁸Cf. a sociological formulation of the same idea: "Values are never absolute, but only relative. . . . A certain quality it ought to be; therefore we place a value upon it, and . . . encourage and cultivate it. As a result of this valuation we call it a virtue; but if the same quality should become superabundant we should call it a vice and try to repress it."—Carver, *Essays in Social Justice*.

multiplied by being shared. It is more important than justice: for "when men are friends, justice is unnecessary; but when men are just, friendship is still a boon." "A friend is one soul in two bodies." Yet friendship implies few friends rather than many; "he who has many friends has no friend"; and "to be a friend to many people in the way of perfect friendship is impossible." Fine friendship requires duration rather than fitful intensity; and this implies stability of character; it is to altered character that we must attribute the dissolving kaleidoscope of friendship. And friendship requires equality; for gratitude gives it at best a slippery basis. Benefactors are commonly held to have more friendship for the objects of their kindness than these for them.

The account of the matter which satisfies most persons is that the one are debtors and the other creditors, . . . and the debtors wish their creditors out of the way, while the creditors are anxious that their debtors should be preserved. Aristotle rejects this interpretation; he prefers to believe that the greater tenderness of the benefactor is to be explained on the analogy of the artist's affection for his work, or the mother's for her child. We love that which we have made.⁵⁹

And yet, though external goods and relationships are necessary to happiness, its essence remains within us, in rounded knowledge and clarity of soul. Surely sense pleasure is not the way: that road is a circle; as Socrates phrased the coarser Epicurean idea, we scratch that we may itch, and itch that we may scratch. Nor can a political career be the way; for therein we walk subject to the whims of the

⁵⁹*Ethics*, viii and ix.

people; and nothing is so fickle as the crowd. No, happiness must be a pleasure of the mind; and we may trust it only when it comes from the pursuit or the capture of truth. "The operation of the intellect . . . aims at no end beyond itself, and finds in itself the pleasure which stimulates it to further operation; and since the attributes of self-sufficiency, unweariedness, and capacity for rest, . . . plainly belong to this occupation, in it must lie perfect happiness."⁶⁰

Aristotle's ideal man, however, is no mere metaphysician. "He does not expose himself needlessly to danger, since there are few things for which he cares sufficiently; but he is willing, in great crises, to give even his life,—knowing that under certain conditions it is not worth while to live. He is of a disposition to do men service, though he is ashamed to have a service done to him. To confer a kindness is a mark of superiority; to receive one is a mark of subordination . . . He does not take part in public displays . . . He is open in his dislikes and preferences; he talks and acts frankly, because of his contempt for men and things . . . He is never fired with admiration, since there is nothing great in his eyes. He cannot live in complaisance with others, except it be a friend; complaisance is the characteristic of a slave . . . He never feels malice, and always forgets and passes over injuries . . . He is not fond of talking . . . It is no concern of his that he should be praised, or that others should be blamed. He does not speak evil of others, even of his enemies, unless it be to themselves. His carriage is sedate, his voice deep, his speech measured; he is not given to hurry, for he is concerned about only a few things; he is not

⁶⁰*Ethics*, x, 7.

prone to vehemence, for he thinks nothing very important. A shrill voice and hasty steps come to a man through care . . . He bears the accidents of life with dignity and grace, making the best of his circumstances, like a skillful general who marshals his limited forces with all the strategy of war . . . He is his own best friend, and takes delight in privacy whereas the man of no virtue or ability is his own worst enemy, and is afraid of solitude."⁶¹

Such is the Superman of Aristotle.

VIII. POLITICS

1. COMMUNISM AND CONSERVATISM

To so aristocratic an ethic there naturally follows (or was the sequence the other way?) a severely aristocratic political philosophy. It was not to be expected that the tutor of an emperor and the husband of a princess would have any exaggerated attachment to the common people, or even to the mercantile bourgeoisie; our philosophy is where our treasure lies. But further, Aristotle was honestly conservative because of the turmoil and disaster that had come out of Athenian democracy; like a typical scholar he longed for order, security, and peace; this, he felt, was no time for political extravaganzas. Radicalism is a luxury of stability; we may dare to change things only when things lie steady under our hands. And in general, says Aristotle, "the habit of lightly changing the laws is an evil; and when the advantage of change is small, some defects whether in the law or in the ruler had better be met with philosophic toleration. The citizen will gain less by the change than he will lose by acquiring the habit of disobedience."⁶² The

⁶¹*Ethics*, iv, 3.

⁶²*Politics*, ii, 8.

power of the law to secure observance, and therefore to maintain political stability, rests very largely on custom; and "to pass lightly from old laws to new ones is a certain means of weakening the inmost essence of all law whatever."⁶³ "Let us not disregard the experience of ages: surely, in the multitude of years, these things, if they were good, would not have remained unknown."⁶⁴

"These things" of course, means chiefly Plato's communistic republic. Aristotle fights the realism of Plato about universals, and the idealism of Plato about government. He finds many dark spots in the picture painted by the Master. He does not relish the barrack-like continuity of contact to which Plato apparently condemned his guardian philosophers; conservative though he is, Aristotle values individual quality, privacy, and liberty above social efficiency and power. He would not care to call every contemporary brother or sister, nor every elder person father or mother; if all are your brothers, none is; and "how much better it is to be the real cousin of somebody than to be a son after Plato's fashion!"⁶⁵ In a state having women and children in common, "love will be watery. . . . Of the two qualities which chiefly inspire regard and affection—that a thing is your own, and that it awakens real love in you—neither can exist in such a state" as Plato's.⁶⁶

Perhaps there was, in the dim past, a communistic society, when the family was the only state, and pasturage or simple tillage the only form of life. But "in a more divided state of society," where the division of labor into unequally important functions elicits and en-

⁶³*Politics*, v, 8.

⁶⁴*Ibid.*, ii, 5.

⁶⁵*Politics*, ii, 3.

⁶⁶*Ibid.*, ii, 4.

larges the natural inequality of men, communism breaks down because it provides no adequate incentive for the exertion of superior abilities. The stimulus of gain is necessary to arduous work; and the stimulus of ownership is necessary to proper industry, husbandry and care. When everybody owns everything nobody will take care of anything. "That which is common to the greatest number has the least attention bestowed upon it. Everyone thinks chiefly of his own, hardly ever of the public interest."⁶⁷ And "there is always a difficulty in living together, or having things in common, but especially in having common property. The partnerships of fellow-travelers" (to say nothing of the arduous communism of marriage), "are an example to the point; for they generally fall out by the way, and quarrel about any trifle that turns up."⁶⁸

"Men readily listen" to Utopias, "and are easily induced to believe that in some wonderful manner everybody will become everybody's friend, especially when someone is heard denouncing the evils now existing, . . . which are said to arise out of the possession of private property. These evils, however, arise from quite another source—the wickedness of human nature."⁶⁹ "Political science does not make men, but must take them as they come from nature."⁷⁰

And human nature, the human average, is

⁶⁷*Politics*, ii, 3.

⁶⁸*Ibid.*, ii, 5.

⁶⁹*Ibid.* Note that conservatives are pessimists, and radicals are optimists, about human nature, which is probably neither so good nor so bad as they would like to believe, and may be not so much nature as early training and environment.

⁷⁰*Ibid.*, i, 10.

nearer to the beast than to the god. The great majority of men are natural dunces and sluggards; in any system whatever these men will sink to the bottom; and to help them with state subsidies is "like pouring water into a leaking cask." Such people must be ruled in politics and directed in industry; with their consent if possible, without it if necessary. "From the hour of their birth some are marked out for subjection, and others for command."⁷¹ "For he who can foresee with his mind is by nature intended to be lord and master; and he who can work only with his body is by nature a slave."⁷² The slave is to the master what the body is to the mind; and as the body should be subject to the mind, so "it is better for all inferiors that they should be under the rule of a master."⁷³ "The slave is a tool with life in it, the tool is a lifeless slave." And then our hard-hearted philosopher, with a glimmer of possibilities which the Industrial Revolution has opened to our hands, writes for a moment with wistful hope: "If every instrument would accomplish its own work, obeying or anticipating the will of others, . . . if the shuttle would weave, or the plectrum touch the lyre, without a hand to guide them, then chief workmen would not need assistants nor masters slaves."⁷⁴

This philosophy typifies the Greek disdain

⁷¹*Politics*, i, 5.

⁷²*Ibid.*, i, 2. Perhaps *slave* is too harsh a rendering of *doulos*; the word was merely a frank recognition of a brutal fact which in our day is perfumed with talk about the dignity of labor and the brotherhood of man; in nothing do we so far surpass the ancients as in making phrases.

⁷³*Ibid.*, i, 5.

⁷⁴*Ibid.*, i, 4.

for manual labor. Such work in Athens had not become so complicated as it is today, when the intelligence demanded in many manual trades is at times much greater than that required for the operations of the lower middle class, and even a college professor may look upon an automobile mechanic (in certain exigencies) as a very god; manual work was then merely manual, and Aristotle looked down upon it, from the heights of philosophy, as belonging to men without minds, as only fit for slaves, and fitting men only for slavery. Manual labor, he believes, dulls and deteriorates the mind, and leaves neither time nor energy for political intelligence; it seems to Aristotle a reasonable corollary that only persons of some leisure should have a voice in government.⁷⁵ "The best form of state will not admit mechanics to citizenship. . . . At Thebes there was a law that no man could hold office who had not retired from business ten years before."⁷⁶ Even merchants and financiers are classed by Aristotle among slaves. "Retail trade is unnatural, . . . and a mode by which men gain from one another. The most hated sort of such exchange is . . . usury, which makes a gain out of money itself, and not from its natural use. For money was intended as an instrument of exchange, and as the mother of interest. This usury (*tokos*), which means the birth of money from money, . . . is of all modes of gain the most unnatural."⁷⁷ Money should not breed. Hence "the discussion of the theory of finance is not unworthy of philosophy; but to be en-

⁷⁵*Politics*, iii, 3; vii, 8.

⁷⁶*Ibid.*, iii, 5.

⁷⁷*Ibid.*, i, 10. This view influenced the medieval prohibition of interest.

gaged in finance, or in money-making, is unworthy of a free man."⁷⁸

2. MARRIAGE AND EDUCATION

"Woman is to man as the slave to the master, the manual to the mental worker, the barbarian to the Greek. Woman is an unfinished man, left standing on a lower step in the scale of development.⁷⁹ The male is by nature superior, and the female inferior; the one rules and the other is ruled; and this principle extends, of necessity, to all mankind." Woman is weak of will, and therefore incapable of independence of character or position; her best condition is a quiet home life in which, while ruled by the man in her external relations, she may be in domestic affairs supreme. Women should not be made more like men, as in Plato's republic; rather the dissimilarity should be increased; nothing is so attractive as the different. "The courage of a man and that of a woman are not, as Socrates supposed, the same: the courage of a man is shown in commanding; that of a woman in obeying. . . . As the poet says, 'Silence is a woman's glory.'⁸⁰

⁷⁸*Politics*, i, 11. Aristotle adds that philosophers could succeed in such fields if they cared to descend into them; and he proudly points to Thales, who, foreseeing a good harvest, bought up all the reapers in his city, and then, at harvest time, sold them at his own sweet price; whereupon Aristotle observes that the universal secret of great riches is the creation of a monopoly.

⁷⁹*De Gen. Animalium*, ii, 3; *Hist. Animalium*, viii, 1; *Pol.*, i, 5. Cf. Weininger; and Meredith's "Woman will be the last thing civilized by man" (*Ordeal of Richard Feverel*, p. 1). It appears, however, that man was, (or will be) the last thing civilized by woman; for the great civilizing agencies are the family and a settled economic life; and both of these are the creations of woman.

⁸⁰*Politics*, i, 13.

Aristotle seems to suspect that this ideal enslavement of woman is a rare achievement for man, and that as often as not the scepter is with the tongue rather than with the arm. As if to give the male an indispensable advantage, he advises him to defer marriage till the vicinity of thirty-seven, and then to marry a lass of some twenty years. A girl who is rounding the twenties is usually the equal of a man of thirty, but may perhaps be managed by a seasoned warrior of thirty-seven. What attracts Aristotle to this matrimonial mathematics is the consideration that two such disparate persons will lose their reproductive power and passions at approximately the same time. "If the man is still able to beget children while the woman is unable to bear them, or *vice versa*, quarrels and differences will arise. . . . Since the time of generation is commonly limited within the age of seventy years in the man, and fifty in the woman, the commencement of their union should conform to these periods. The union of male and female when too young is bad for the creation of children; in all animals the offspring of the young are small and ill-developed, and generally female." Health is more important than love. Further, "it conduces to temperance not to marry too soon; for women who marry early are apt to be wanton; and in men too the bodily frame is stunted if they marry while they are growing."⁸¹ These matters should not be left to youthful caprice, they should be under state supervision and control: the state should determine the minimum and maximum

⁸¹*Politics*, vii, 16. It is apparent that Aristotle has in mind only the temperance of women; the moral effect of deferred marriage upon men does not seem to agitate him.

ages of marriages for each sex, the best seasons for conception, and the rate of increase in population. If the natural rate of increase is too high, the cruel practice of infanticide may be replaced by abortion; and "let abortion be procured before sense and life have begun."⁸² There is an ideal number of population for every state, varying with its position and resources. "A state when composed of too few is not, as a state should be, self-sufficing; while if it has too many . . . it becomes a nation and not a state, and is almost incapable of constitutional government,"⁸³ or of ethnic or political unity. Probably anything in excess of a population of 10,000 is undesirable.

Education, too, should be in the hands of the state. "That which most contributes to the permanence of constitutions is the adaptation of education to the form of government. . . . The citizen should be moulded to the form of government under which he lives."⁸⁴ By state control of schools we might divert men from industry and trade to agriculture; and we might train men, while keeping property private, to open their possessions to discriminately common use. "Among good men, with respect to the use of property, the proverb will hold, that 'friends should have all things in common.'"⁸⁵ But above all the growing citizen must be taught obedience to law else a state is impossible. "It has been well said that 'he who has never learned to obey cannot be a good commander.' . . . The good citizen should be capable of both." And only a state system of schools can achieve social unity amid ethnic heterogeneity; the state is a plurality which must be made into a unity and a community by

⁸²*Politics.*⁸³*Ibid.*, vii, 4.⁸⁴*Ibid.*, v, 9; viii, 1.⁸⁵*Ibid.*, vi, 4; ii, 5.

education.⁸⁶ Let youth be taught, too, the great boon it has in the state, the unappreciated security which comes of social organization, the freedom that comes of law. "Man, when perfected, is the best of animals; but when isolated he is the worst of all; for injustice is more dangerous when armed, and man is equipped at birth with the weapon of intelligence, and with qualities of character which he may use for the vilest ends. Wherefore if he have not virtue he is the most unholy and savage of animals, full of gluttony and lust." And only social control can give him virtue. Through speech man evolved society; through society, intelligence; through intelligence, order; and through order, civilization. In such an ordered state the individual has a thousand opportunities and avenues of development open to him which a solitary life would never give. "To live alone," then, "one must be either an animal or a god."⁸⁷

Hence revolution is almost always unwise; it may achieve some good, but at the cost of many evils, the chief of which is the disturbance, and perhaps the dissolution, of that social order and structure on which every political good depends. The direct consequences of revolutionary innovations may be calculable and salutary; but the indirect are generally incalculable, and not seldom disastrous. "They who take only a few points into account find it easy to pronounce judgment"; and a man can make up his mind quickly if he has only a little to make up. "Young men are easily deceived, for they are quick to hope." The suppression

⁸⁶*Politics*, iii, 4; ii, 5.

⁸⁷*Ibid.*, i, 2. "Or," adds Nietzsche, who takes nearly all of his political philosophy from Aristotle, "one must be both—that is, a philosopher."

of long-established habits brings the overthrow of innovating government because the old habits persist among the people; characters are not as easily changed as laws. If a constitution is to be permanent, all the parts of a society must desire it to be maintained. Therefore a ruler who would avoid revolution should prevent extremes of poverty and wealth,—“a condition which is most often the result of war”; he should (like the English) encourage colonization as an outlet for a dangerously congested population; and he should foster and practice religion. An autocratic ruler particularly “should appear to be earnest in the worship of the gods; for if men think that a ruler is religious and reveres the gods, they are less afraid of suffering injustice at his hands, and are less disposed to conspire against him, since they believe that the gods themselves are fighting on his side.”⁸⁸

3. DEMOCRACY AND ARISTOCRACY

With such safeguards in religion, in education, and in the ordering of family life, almost any of the traditional forms of government will serve. All forms have good and bad commingled in them, and are severally adapted to various conditions. Theoretically, the ideal form of government would be the centralization of all political power in the one best man. Homer is right: “Bad is the lordship of many; let one be your ruler and master.” For such a man law would be rather an instrument than a limit: “for men of eminent ability there is no law—they are themselves a law. Anyone would be ridiculous who should attempt to make laws for them; they would probably retort what, in the fable of Antisthenes, the lions

⁸⁸*Politics*, iv, 5; ii, 9; v, 7; ii, 11.

said to the hares when, in the council of beasts, the latter began haranguing and claiming equality for all—"Where are your claws?"⁸⁹

But in practice monarchy is usually the worst form of government, for great strength and great virtue are not near allied. Hence the best practicable polity is aristocracy, the rule of the informed and capable few. Government is too complex a thing to have its issues decided by number, when lesser issues are reserved for knowledge and ability. "As the physician ought to be judged by the physician, so ought men in general to be judged by their peers. . . . Now does not this same principle apply to elections? For a right election can only be made by those who have knowledge: a geometrician, e.g., will choose rightly in matters of geometry; or a pilot in matters of navigation. . . ."⁹⁰ So that neither the election of magistrates nor the calling of them to account should be entrusted to the many."

The difficulty with hereditary aristocracy is that it has no permanent economic base; the eternal recurrence of the *nouveaux riches* puts political office sooner or later at the disposal of the highest bidder. "It is surely a bad thing that the greatest offices . . . should be bought. The law which permits this abuse makes wealth of more account than ability, and the whole state becomes avaricious. For whenever the chiefs of the state deem anything honorable, the other citizens are sure to follow their

⁸⁹*Politics*, iii, 13. Aristotle probably had Alexander or Philip in mind while writing this passage, just as Nietzsche seems to have been influenced towards similar conclusions by the alluring career of Napoleon.

⁹⁰*Ibid.*, iii, 11. Cf. the modern argument for "occupational representation."

example" (the "prestige imitation" of modern social psychology); "and where ability has not the first place there is no real aristocracy."⁹¹

Democracy is usually the result of a revolution against plutocracy. "Love of gain in the ruling classes tends constantly to diminish their number" (Marx's "elimination of the middle class"), "and so to strengthen the masses, who in the end set upon their masters and establish democracies." This "rule by the poor" has some advantages. "The people, though individually they may be worse judges than those who have special knowledge, are collectively as good. Moreover, there are some artists whose works are best judged not by themselves alone, but by those who do not possess the art; e.g., the user or master of a house will be a better judge of it than the builder; . . . and the guest will be a better judge of a feast than the cook."⁹² And "the many are more incorruptible than the few; they are like the greater quantity of water which is less easily spoiled than a little. The individual is liable to be overcome by anger, or by some other passion, and then his judgment is necessarily perverted; but it is hardly to be supposed that a great number of persons would all get into a passion and go wrong at the same moment."⁹³

⁹¹*Politics*, ii, 11.

⁹²*Ibid.*, iii, 15, 8, 11. In these passages we have a fair outline of a desirable amendment to democracy; administration by experts democratically chosen by occupational ballot, and pursuing ends determined by the whole community.

⁹³*Ibid.*, iii, 15. Tarde, *Le Bon* and other social psychologists assert precisely the contrary; and though they exaggerate the vices of the crowd, they might find better support than Aristotle in the behavior of the Athenian Assembly 430-330 B. C.

Yet democracy is on the whole inferior to aristocracy.⁹⁴ For it is based on a false assumption of equality; it "arises out of the notion that those who are equal in one respect (e.g., in respect of the law) are equal in all respects; because men are equally free they claim to be absolutely equal." The upshot is that ability is sacrificed to number, while numbers are manipulated by trickery. Because the people are so easily misled, and so fickle in their views, the ballot should be limited to the intelligent. What we need is a combination of aristocracy and democracy.

Constitutional government offers this happy union. It is not the best conceivable government—that would be an aristocracy of education—but it is the best possible state. "We must ask what is the best constitution for most states, and the best life for most men; neither assuming a standard of excellence which will be above ordinary persons, nor an education exceptionally favored by nature or circumstance, nor yet an ideal state which will be only an inspiration; but having in mind such a life as the majority will be able to share, and a form of government to which states in general can attain." "It is necessary to begin by assuming a principle of general application, namely, that that part of the state which desires the continuance of the government must be stronger than that which does not";⁹⁵ and strength consists neither in number alone, nor in property alone, nor in military or political ability alone, but in a combination of these, so that regard has to be taken of "freedom, wealth, culture and noble birth, as well as of mere numerical superiority." Now where shall we

⁹⁴*Politics*, ii, 9. ⁹⁵*Ibid.*, iv, 11, 10.

find such an *economic* majority to support our constitutional government? Perhaps best in the middle class: here again we have the golden mean, just as constitutional government itself would be a mean between democracy and aristocracy. Our state will be sufficiently democratic if the road to every office is open to all; and sufficiently aristocratic if the offices themselves are closed except to those who have traveled the road and arrived fully prepared. From whatever angle we approach our eternal political problem we monotonously reach the same conclusion: that the community should determine the ends to be pursued, but that only experts should select and apply the means; that choice should be democratically spread, but that office should be rigidly reserved for the equipped and winnowed best.

IX. CRITICISM

What shall we say of this philosophy? Perhaps nothing rapturous. It is difficult to be enthusiastic about Aristotle, because it was difficult for him to be enthusiastic about anything; and *si vis me flere, primum tibi flendum*.⁹⁶ His motto is *nil admirari*—to admire or marvel at nothing; and we hesitate to violate his motto in his case. We miss in him the reforming zeal of Plato, the angry love of humanity which made the great idealist denounce his fellow-men. We miss the daring originality of his teacher, the lofty imagination, the capacity for generous delusion. And yet, after reading Plato, nothing could be so salutary for us as Aristotle's skeptic calm.

Let us summarize our disagreement. We are bothered, at the outset, with his insistence on

⁹⁶"If you wish me to weep you must weep first"—Horace (*Ars Poetica*) to actors and writers.

logic. We want him to describe his ideal, and he describes a perfect syllogism; not content with that he makes his syllogism judge of our ideals. He thinks the syllogism a description of man's way of reasoning, whereas it merely describes man's way of dressing up his reasoning for the persuasion of another mind; he supposes that thought begins with premises and seeks their conclusions, when actually thought begins with hypothetical conclusions and seeks their justifying premises,—and seeks them best by the observation of particular events under the controlled and isolated conditions of experiment. Yet how foolish we should be to forget that two thousand years have changed merely the incidentals of Aristotle's logic, that Occam and Bacon and Whewell and Mill and a hundred others have but found spots in his sun, and that Aristotle's creation of this new discipline of thought, and his firm establishment of its essential lines, remain among the lasting achievements of the human mind.

It is again the absence of experiment and fruitful hypothesis that leaves Aristotle's natural science a mass of undigested observations. His specialty is the collection and classification of data; in every field he wields his categories and produces catalogues. But side by side with this bent and talent for observation goes a Platonic addiction to metaphysics; this trips him up in every science, and inveigles him into the wildest presuppositions. Here indeed was the great defect of the Greek mind: it was not disciplined; it lacked limiting and steadying traditions; it moved freely in an uncharted field, and ran too readily to theories and conclusions. So Greek philosophy leaped on to heights yet unreached again, while Greek science limped behind. Our modern danger is precisely opposite; inductive data fall upon us

from all sides like the lava of Vesuvius; we suffocate with uncoordinated facts; our minds are overwhelmed with sciences breeding and multiplying into specialistic chaos for want of synthetic thought and a unifying philosophy. We are all mere fragments of what a man might be.

Aristotle's ethics is a branch of his logic: the ideal life is like a proper syllogism. He gives us a handbook of propriety rather than a stimulus to improvement. An ancient critic spoke of him as "moderate to excess." An extremist might call the *Ethics* the champion collection of platitudes in all literature; and an Anglophobe would be consoled with the thought that Englishmen in their youth had done advance penance for the imperialistic sins of their adult years, since both at Cambridge and at Oxford they had been compelled to read every word of the Nicomachean Ethics. One longs to mingle fresh green *Leaves of Grass* with these drier pages, to add Whitman's exhilarating justification of sense joy to Aristotle's exaltation of a purely intellectual happiness. One wonders if this Aristotelian ideal of immoderate moderation has had anything to do with the colorless virtue, the starched perfection, the expressionless good form, of the British aristocracy. Matthew Arnold tells us that in his time Oxford tutors looked upon the *Ethics* as infallible. For three hundred years this book and the *Politics* have formed the ruling British mind, perhaps to great and noble achievements, but certainly to a hard and cold efficiency: one wonders what the result would have been if the masters of the greatest of empires had been nurtured, instead, on the holy fervor and the constructive passion of the *Republic*.

After all, Aristotle was not quite Greek; he had been settled and formed before coming to

Athens; there was nothing Athenian about him, nothing of the hasty and inspiriting experimentalism which made Athens throb with political *élan* and at last helped to subject her to a unifying despot. He realized too completely the Delphic command to avoid excess: he is so anxious to pare away extremes that at last nothing is left. He is so fearful of disorder that he forgets to be fearful of slavery; he is so timid of uncertain change that he prefers a certain changelessness that near resembles death. He lacks that Heraclitean sense of flux which justifies the conservative in believing that all permanent change is gradual, but justifies the radical in believing that no changelessness is permanent. He forgets that Plato's communism was meant only for the élite, the unselfish and ungreedy few; and he comes deviously to a Platonic result when he says that though property should be private its use should be as far as possible common. He does not see (and perhaps he could not be expected in his early day to see) that private control of the means of production was stimulating and salutary only when these means were so simple as to be purchasable by any man; and that their increasing complexity and cost lead to a dangerous centralization of ownership and power, and to an artificial and finally disruptive inequality.

But after all, these are quite inessential criticisms of what remains the most marvelous and influential system of thought ever put together by any single mind. It may be doubted if any other thinker has contributed so much to the enlightenment of the world. Every later age has drawn upon Aristotle, and stood upon his shoulders to see the truth. The varied and magnificent culture of Alexandria found its

scientific inspiration in him. His *Organon* played a central rôle in shaping the minds of the medieval barbarians into disciplined and consistent thought. The other works, translated by Nestorian Christians into Syriac in the fifth century A. D., and thence into Arabic and Hebrew in the tenth century, and thence into Latin towards 1225, turned scholasticism from its eloquent beginnings in Abélard to encyclopedic completion in Thomas Aquinas (1227-1274). The Crusaders brought back more accurate Greek copies of the philosopher's texts; and the Greek scholars of Constantinople brought further Aristotelian treasures with them when, after 1453, they fled from the besieging Turks. The works of Aristotle came to be for European philosophy what the Bible was for theology—an almost infallible text, with solutions for every problem. In 1215 the Papal legate at Paris forbade teachers to lecture on his works; in 1231 Gregory IX appointed a commission to expurgate him; by 1260 he was *de rigueur* in every Christian school, and ecclesiastical assemblies penalized deviations from his views. Chaucer describes his student as happy by having

At his beddes hed
Twenty bookes clothed in blake or red,
Of Aristotle and his philosophie;⁹⁷

and in the first circles of Hell, says Dante,

I saw the Master there of those who know,
Amid the philosophic family,
By all admired, and by all revered;
There Plato too I saw, and Socrates,
Who stood beside him closer than the rest.⁹⁸

Such lines give us some inkling of the honor

⁹⁷Quoted by Benn, i, 276.

⁹⁸*Inferno*, iv, 131f.

which a thousand years offered to the Stagirite. Not till new instruments, accumulated observations, and patient experiments remade science and gave irresistible weapons to Occam and Ramus, to Roger and Francis Bacon, was the reign of Aristotle ended. No other mind had for so long a time ruled the intellect of mankind.

X. LATER LIFE AND DEATH

Meanwhile life had become unmanageably complicated for our philosopher. He found himself on the one hand embroiled with Alexander for protesting against the execution of Callisthenes (a nephew of Aristotle), who had refused to worship Alexander as a god; and Alexander had answered the protest by hinting that it was quite within his omnipotence to put even philosophers to death. At the same time Aristotle was busy defending Alexander among the Athenians. He preferred Greek solidarity to city patriotism, and thought culture and science would flourish better when petty sovereignties and disputes were ended; and he saw in Alexander what Goethe was to see in Napoleon—the philosophic unity of a chaotic and intolerably manifold world. The Athenians, hungering for liberty, growled at Aristotle, and became bitter when Alexander had a statue of the philosopher put up in the heart of the hostile city. In his turmoil we get an impression of Aristotle quite contrary to that left upon us by his *Ethics*: here is a man not cold and inhumanly calm, but a fighter, pursuing his Titanic work in a circle of enemies on every side. The successors of Plato at the Academy, the oratorical school of Isocrates, and the angry crowds that hung on Demosthenes' acid eloquence, intrigued and clamored for his exile or his death.

And then, suddenly (323 B. C.), Alexander died. Athens went wild with patriotic joy; the Macedonian party was overthrown, and Athenian independence was proclaimed. Antipater, successor of Alexander and intimate friend of Aristotle, marched upon the rebellious city. Most of the Macedonian party fled. Eurymedon, a chief priest, brought in an indictment against Aristotle, charging him with having taught that prayer and sacrifice were of no avail. Aristotle saw himself fated to be tried by juries and crowds incomparably more hostile than those that had murdered Socrates. Very wisely, he left the city, saying that he would not give Athens a chance to sin a second time against philosophy. There was no cowardice in this; an accused person at Athens had always the option of preferring exile.⁹⁹ Arrived at Chalcis, Aristotle fell ill; Diogenes Laertius tells us that the old philosopher, in utter disappointment with the turn of all things against him, committed suicide by drinking hemlock.¹⁰⁰ However induced, his illness proved fatal; and a few months after leaving Athens (322 B. C.) the lonely Aristotle died.

In the same year, and at the same age, sixty-two, Demosthenes, greatest of Alexander's enemies, drank poison. Within twelve months Greece had lost her greatest ruler, her greatest orator, and her greatest philosopher. The glory that had been Greece faded now in the dawn of the Roman sun; and the grandeur that was Rome was the pomp of power rather than the light of thought. And then that grandeur too decayed, that little light went almost out. For a thousand years darkness brooded over the face of Europe. All the world awaited the resurrection of philosophy.

⁹⁹Grote, 20. ¹⁰⁰Grote, 22; Zeller, i, 37 note.

